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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,634	04/27/2001	Kazumi Fujii	Q64245	8848

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04/19/2002

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EXAMINER

SHIPSIDES, GEOFFREY P

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 04/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,634

Applicant(s)

FUJII, KAZUMI

Examiner

Geoffrey P. Shippides

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Claims 1-7 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected Group I, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.
2. Applicant's election without traverse of Group II, claims 8-13, in Paper No. 4 is acknowledged.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. Claims 8 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application EP-0767116-A2 (Pedersen).

Pederson teaches a method of producing a conduit scraping conveyor for conveying food to a plurality of feeding places in a stable (Abstract, lines 1-2). This conduit scraping conveyor consists of a cable having discs disposed thereon in a predetermined spacing relation (Figure 1; Abstract, lines 3-5).

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With regard to claim 8, Pederson teaches a method of forming this conduit scraping conveyor by injection molding flight discs directly onto the steel cable and molding an elastic coating layer between neighboring flights on to the cable (Abstract, lines 14-25; Figure 1). Pederson teaches that polypropylene or polyamide based elastomers could be used to coat the cable (Column 3, lines 3-7) which constitute synthetic resins.

With regard to claim 12, Pederson teaches that polypropylene or polyamide can be used to produce the flights (Column 3, lines 3-7), which constitute synthetic resins. Pederson teaches a method of first forming the flights (disks) that include sockets (flange or boss parts) on to the cable followed by forming the cable coating between the flights and also on to the sockets (Figure 1).

With regard to claim 13, the socket part of the flight has protrusions that secure good fixation of the ends of these protrusions and the wire coating (Column 3, lines 39-42). As can be seen if Figure 1, in between these protrusions are depressions in the sockets and the material forming the cable coating forms corresponding protrusions that depressions that fit with the protrusions and depressions on the socket part (Figure 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application EP-0767116-A2 (Pedersen) in view of U.S. Patent No. 3,992,503 (Henfrey et al.).

The discussion of Pedersen as applied to claims 8, 12, and 13 above applies herein.

With regard to claims 10 and 11, Pedersen also teaches that the solution of forming flights and cable coating out of the same material in an injection molding technique has been examined but dropped due to the lack of a material that could fulfill both the requirements for sties for the flights and the flexibility for the coating parts (Column 2, lines 21-28). Although Pedersen teaches away from the use of a single material as such, Pedersen does by this teaching teach that such a solution to the given problem has been anticipated in the art. Pedersen does not specifically teach how such a solution is directly carried out, however, Henfrey et al. teaches a method of injection molding pipe (title) that has outer ridges against an inner mold part (Figure 2) by sequentially moving previously molded sections into engagement with the mold such that the formed part forms a closure for the mold cavity (Abstract, Figure 2) such that the next section of pipe could be injection molded). Henfrey et al. also teaches a "stepped diameter as at 14" (Column 3, line 20) to improve the connective strength between sections of pipe formed (Figure 2); this structure constitutes a fitting hole. It is further well known in the art at the time of invention that molded articles may be bi-injection molded to form integral articles in a single molding operation with different portions of different properties. It would have been obvious to one having ordinary skill

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in the art at the time of invention to create a conduit scraping conveyor as taught by Pederson by a method of forming an indefinite length article with ridges by injection molding as taught by Henfrey et al. in order to facilitate the molding process by reducing the number of molding steps. It would have been further obvious to one having ordinary skill in the art at the time of invention to use a suitable material that meets both the flexibility and rigidity required for the cable coating and the flights respectively as taught by Pederson if such a material is found to exist in order to simplify the molding process of such a product. It would have been further obvious to one having ordinary skill in the art at the time of invention to use the well known method of bi-injection molding of different materials into a single molding cavity such as one taught by Henfrey et al. in a single molding operation to produce the conduit scraping conveyor as taught by Pederson with a flight directly connected to that cable of a rigid material and a cable coating of a flexible material in a continuous operation as taught by Henfrey et al. directly on to a cable as taught by Pedersen in order to speed up production by reducing the number of molding steps. It would have been further obvious to one having ordinary skill in the art at the time of invention to incorporate the use of fitting holes as taught by Henfrey et al. into the molding steps in order to produce a better connection between sequentially molded parts of the conduit scraping conveyor molded in the method as taught by Henfrey et al. It would have been further obvious to one having ordinary skill in the art at the time of invention to mold the sequentially molded parts directly onto a cable as taught by Pedersen instead of against an inner mold part as taught by Henfrey et al. so as to have the molded part molded directly against the

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cable as taught by Pedersen and it would have been obvious for one having ordinary skill in the art to do this in order to create the integral connection between the coating, flights, and cable as taught by Pedersen. It would have been further obvious to one having ordinary skill in the art at the time of invention that a cable could have and would have been substituted for the core mold part as taught by Henfrey et al. in order to achieve the desired results as discussed above because a cable constitutes the same cross sectional shape as the core member as taught by Henfrey et al.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Application EP-0767116-A2 (Pedersen) in view of Japanese Patent No. JP-62103118-A (Yamamoto et al.).

The discussion of Pedersen as applied to claims 8, 12, and 13 above applies herein.

With regard to claim 9, although Pedersen teaches the first injection molding of flight parts on to a cable followed by the injection molding of cable coatings on both the cable between molded flight parts and on to parts of the first molded, Pedersen does not teach that the opposite order could not be preformed. Pedersen teaches that prior art uses of elastomeric coatings fail due to the need to injection mold flights directly on to cable (Column 1, lines 36-44). It is clear from this teaching that the flights must be injection molded on to a part of exposed cable. Yamamoto et al. teaches a method of injecting molding flange members on to a formed notched wire (Constitution and Figures). Pedersen teaches that it is known to use cables that are provided with an elastomeric coating (Column 1, lines 37-38). It is well known in the art to provide cables

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with extruded elastomeric coatings. It is further well known in the art to cut out portions of coating from a coated cable or wire to expose parts of cable or wire. It would have been obvious to one having ordinary skill in the art at the time of invention to reverse the ordered steps of Pedersen to first extrude an elastomeric coating on to a cable as is well known in the art prior to the injection molding of flights on to the cable as taught by Pedersen. It would have been further obvious to one having ordinary skill in the art at the time of invention to provide notches in the cable to expose portions of the cable as is well known in the art in order to improved the connection of the flight to the cable as taught by Pedersen. It would have been obvious to one having ordinary skill in the art at the time of invention to reverse the order to applying the coating and the flight to the cable as taught by Pedersen in order to increase the speed in which such a flight possessing cable could be produced as the extrusion of a coating on to a cable followed by the notching of coating material form the coated cable is less time consuming than the injection molding of individual elastomeric coating sections between flights. It would have been further obvious to one having ordinary skill in the art at the time of invention to reverse the steps of Pedersen as such in order to have a better connected cable coating by embedding and trapping the cable coating under a section of the more rigid material forming the flight. It would have been an obvious modification of the method as taught by Pedersen to reverse these steps of the method as taught by Pedersen, as Pedersen teaches the general steps of injection molding of segments on to a cable with spaces left between the molded segments for the molding of a different material directly on to the segments of cable left exposed and on top of parts of the first molded segment

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and it would have been obvious to reverse the order of the types of segments molded as either order would result in the molding of flight segments directly onto the cable and reversing the order would result in a coating on the cable less likely to strip off as the ends of the coating would be locked under the rigid material of the flights.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 1,430,042 (Raczynski), U.S. Patent No. 2,288,899 (Gits), U.S. Patent No. 3,811,045 (Turner et al.), U.S. Patent No. 3,919,386 (Segal), U.S. Patent No. 3,985,948 (Olszewski et al.), U.S. Patent No. 4,045,604 (Clabburn), U.S. Patent No. 4,373,113 (Winkler et al.), U.S. Patent No. 4,396,797 (Sakuragi et al.), U.S. Patent No. 4,806,398 (Martin, Jr.), U.S. Patent No. 5,280,136 (Yaworski et al.), U.S. Patent No. 6,229,092-B1 (Pirovano), U.S. Patent Application No. 2001/0015177-A1 (Fujii), Japanese Patent No. JP-08143125-A (Isaka et al.), Japanese Patent No. JP-2001258418-A (Fujii), European Patent Application No. EP-0145055-A2 (Pirovano), and Great Britain Patent No. GB 1389660 (Styles) are cited as art of interest to show the current state of the art at the time of invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey P. Shipsides whose telephone number is 703-306-0311. The examiner can normally be reached on Monday - Friday 9 AM till 5 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jan H Silbaugh can be reached on 703-308-3829. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Geoffrey P. Shipsides/gps
April 15, 2002


JAN H. SILBAUGH
SUPERVISORY PATENT EXAMINER
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04/18/02